STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST

FOR THE

HANFORD FACILITY,
216-A-36B CRIB CLOSURE

REVISION 1

MARCH 2006

WASHINGTON ADMINISTRATIVE CODE
ENVIRONMENTAL CHECKLIST
[WAC 197-11-960]

A. BACKGROUND

1. Name of proposed project, if applicable:

This *State Environmental Policy Act* (SEPA) *of 1971* Environmental Checklist is being submitted for closure of the Hanford Facility, 216-A-36B Crib. This area will be closed with respect to dangerous waste contamination that resulted from disposal operations as a *Resource Conservation and Recovery Act* (RCRA) *of 1976* treatment, storage, and/or disposal (TSD) unit.

2. Name of applicants:

U.S. Department of Energy, Richland Operations Office (DOE-RL).

3. Address and phone number of applicants and contact persons:

U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

Contact:

Keith A. Klein, Manager
Richland Operations Office
(509) 376-7395

4. Date checklist prepared:

March 2006.

5. Agency requesting the checklist:

Washington State Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

6. Proposed timing or schedule: (including phasing, if applicable):

This SEPA Environmental Checklist is being submitted concurrently with a closure plan [DOE/RL-2005-90, *Closure Plan for the 216-A-36B Crib* (Draft)]; (prepared in accordance with Washington Administrative Code (WAC) 173-303 Dangerous Waste Regulations. The closure plan will be submitted to the Washington State Department of Ecology (Ecology) by April 30, 2006.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No. The aforementioned closure plan is being submitted in accordance with the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Milestone M-020-33 that requires submittal of a closure plan for the 216-A-36B Crib RCRA TSD unit by April 30, 2006.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

This revised SEPA Environmental Checklist is being submitted to Ecology to address the 216-A-36B Crib closure activities. The original SEPA Environmental Checklist was submitted in 1988 along with a closure plan.

Environmental information that has been prepared directly related to this proposal is contained in DOE/RL-2005-90, *Closure Plan for the 216-A-36B Crib* (Draft); DOE/RL-2004-025, *Remedial Investigation Report for the 200-PW2 Uranium-Rich Process Waste Group and the 200-PW-4 General Process Condensate Group Operable Units*; DOE/RL-2000-60, *Uranium-Rich/General Process Condensate and Process Waste Group Operable Unit RI/FS Work Plan and RCRA TSD Unit Sampling Plan – Includes: 200-PW-2 and 200-PW-4 Operable Units*; and groundwater data contained in the Hanford Environmental Information System (HEIS). Non-TSD unit constituents will be addressed through the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* past practice processes identified in the Tri-Party Agreement (Section 7.2) for the consolidated 200-PW-2 and 200-PW-4 Operable Units.

General information concerning the Hanford Facility environment can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 17, September 2005. This document is updated annually by Pacific Northwest National Laboratory (PNNL), and provides current information concerning climate and meteorology, ecology, history and archeology, socioeconomic, land use and noise levels, and geology and hydrology. These baseline data for the Hanford Site and past activities are useful for evaluating proposed activities and their potential environmental impacts.

9. Do you know whether applications are pending for government approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No other applications are pending. However, see response to A.8 regarding physical activities necessary to complete remediation of non-TSD unit constituents.

10. List any government approvals or permits that will be needed for your proposal, if known.

DOE-RL forwards the aforementioned 216-A-36B Crib closure plan (DOE/RL-2005-90)to Ecology for approval.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

The DOE-RL proposes clean closure for the 216-A-36B Crib structures and soils.

With the exception of a large volume discharge of highly radioactive cladding removal waste (CRW), this site received only ammonia scrubber distillate (ASD) waste. Although the crib entered operations in 1966, it operated as a TSD unit for less than one month (i.e., from August 19, 1987, the effective date of RCRA regulation of mixed waste until September 6, 1987 when the unit received its final volume of waste). The final waste discharge was September 6, 1987. Because routine discharges to the crib stopped after designation of the ASD waste stream as a potentially dangerous waste, it is likely that the

September 6, 1987 discharge was the sole ASD waste discharge during the period of TSD unit operations. After this time, ASD waste from the E-F11 concentrator was permanently rerouted to the Double Shell Tank system. The crib has remained out of service. The crib surface backfill material is not contaminated. No stabilization actions have been required at the waste site.

No concentration of TSD unit constituents exceeds clean closure levels in soils. The sole dangerous waste constituent of concern, ammonia from the ammonium hydroxide, is not regulated under WAC 173-340-740(3); therefore, this TSD unit meets WAC 173-303-610 clean closure cleanup requirements without further remediation.

There is no reasonable potential for material remaining at the site (piping and the plastic barrier) to be contaminated above dangerous waste designation levels that represent the clean closure standard for these materials.

No physical activities are required for clean closure. After closure, appearance of the land will be consistent with land use determinations of the Hanford Facility.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The 216-A-36B Crib is located in the 200 East Area about 366 m (1,200 ft) south of the 202-A Building (PUREX Plant). This crib is an engineered, subsurface liquid effluent disposal facility that received PUREX waste from 1966 until October 1972, when the crib temporarily was removed from service. The crib was placed back in service in November 1982 for the restart of the PUREX Plant and operated again until September 6, 1987 when the unit received its final volume of waste. The 216-A-36B Crib is the southern 152 m (500 ft) of the original 216-A-36 Crib. In 1966, the 216-A-36 Crib was reconfigured into two segments, 216-A-36A, and 216-A-36B, by injecting grout into the gravel layer of the crib to form a barrier between the two segments. The crib was reconfigured due to the rapid buildup of fission products in the A segment from what were then routine effluent releases. A smaller diameter pipeline was inserted inside the original 216-A-36A pipeline, effectively moving the discharge point twelve feet south of the grout barrier and bypassing the "A" segment.

The gravel-filled 216-A-36B Crib is 152 m (500 ft) and a width of 3.4 m (11 ft) at the bottom. The bottom of the crib is 7.3 m (24 ft) below grade. A 15 cm (6 in.) diameter perforated stainless steel pipe was placed horizontally 7 m (23 ft) below grade. The crib has been backfilled with 23 feet of clean soil and naturally revegetated over time with native grasses although a program of herbicide treatments has controlled deep rooting plants.

Other associated crib structures include a liquid-level monitoring riser (i.e., a gage well) and a vent riser. The gage well is constructed of 8-in (20 cm), vitreous clay pipe extending from the bottom of the crib to about 3.5 ft (1 m) above grade. The lower portion of the gauge well is perforated to allow monitoring of the depth of liquid in the crib. The vent riser is an 8-in (20 cm) code M-8 stainless steel pipe attached to the end of the distribution line. The vent riser contains an internal tube filter and extends approximately 3 ft (0.92 m) above grade.

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EVALUATIONS FOR AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other_____.

Flat.

b. What is the steepest slope on the site (approximate percent slope)?

The approximate slope of the land is less than 2 percent.

c. What general types of soils are found on the site? (for example, clay, sandy gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Soil types consist mainly of eolian and fluvial sands and gravel. More detailed information concerning specific soil classifications can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 17, September 2005. Farming is not permitted on the Hanford Facility.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

No filling or grading is required.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Does not apply. No construction is proposed as part of this project.

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h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

None.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.

None. No physical activities are required to support closure of the 216-A-36B Crib.

b. Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to the air, if any?

None since no emissions are anticipated for the closure of the 216-A-36B Crib.

3. Water

a. Surface

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No. The 216-A-36B Crib is over 7 kilometers from the Columbia River.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

The work would not require any activity in or near the described waters and drainage.

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3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

There would be no dredging or filling from or to surface water or wetlands.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No surface water withdrawal or diversion would be required.

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

The 216-A-36B Crib is not within the 100-year or 500-year floodplain [*Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 17, September 2005].

6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No.

b. Ground

1) **Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.**

No.

2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

None.

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c. Water Run-off (including storm water)

1) Describe the source of run-off (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The Hanford Facility receives only 15.2 to 17.8 centimeters of annual precipitation. Precipitation runs off the existing buildings and seeps into the soil on and near the buildings. This precipitation does not reach the groundwater or surface waters.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No waste materials can enter ground or surface waters as a result of closure.

d. Proposed measures to reduce or control surface, ground, and run-off water impacts, if any:

No measures are proposed to reduce or control surface, ground, and run-off impacts.

4. Plants

a. Check or circle the types of vegetation found on the site.

- ☐ deciduous tree: alder, maple, aspen, other
- ☐ evergreen tree: fir, cedar, pine, other
- ☒ shrubs
- ☒ grass
- ☐ pasture
- ☐ crop or grain
- ☐ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- ☐ water plants: water lily, eelgrass, milfoil, other
- ☐ other types of vegetation

The most common vegetation community in the 200 East Area is sagebrush/cheatgrass or Sandberg's bluegrass. Native vegetation resides in the immediate vicinity of the 216-A-36B Crib.

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b. What kind and amount of vegetation will be removed or altered?

No vegetation would be removed or altered during 216-A-36B Crib closure activities.

c. List threatened or endangered species known to be on or near the site.

No known threatened or endangered species are known to be on or near the 216-A-36B Crib. Additional information on species can be found in *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision 17, September 2005).

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None.

5. Animals

a. Indicate (by underlining) any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: Raptors (burrowing owls, ferruginous, redtail, and Swainson's hawks) eagles, songbirds,
animals: deer, elk, coyotes, rabbits, rodents.

Additional information on animals can be found in *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision 17, September 2005).

b. List any threatened or endangered species known to be on or near the site.

One federal and state listed threatened or endangered species has been identified on the 1,517 square kilometer Hanford Site along the Columbia River (the bald eagle) and three in the Columbia River (steelhead, spring-run Chinook salmon, and bull trout). In addition, the state listed white pelican, sandhill crane, and ferruginous hawk also occur on or migrate through the Hanford Site.

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c. Is the site part of a migration route? If so, explain.

The Hanford Site is a part of the broad Pacific Flyway. However, the 216-S-7 Pond and Ditch location is not known as a haven for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:

This project contains no specific measures to preserve or enhance wildlife.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

None.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

None.

1) Describe special emergency services that might be required.

No special emergency services are known to be required.

2) Proposed measures to reduce or control environmental health hazards, if any:

None.

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b. Noise

1) What type of noise exists in the area which may affect your project (for example: traffic, equipment, operation, other)?

None is anticipated.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

None is anticipated.

3) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

The 216-A-36B Crib site is not in use. Adjacent properties are industrial/research.

b. Has the site been used for agriculture? If so, describe.

No portion of the 200 East Area has been used for agricultural purposes since 1943.

c. Describe any structures on the site.

There are no structures at the 216-A-36B Crib site.

d. Will any structures be demolished? If so, what?

Does not apply. There are no structures on the site (refer to Section B.8.c).

e. What is the current zoning classification of the site?

Does not apply. The site is located on Federal lands and as such is not subject to the Growth Management Act (State of Washington land use authority). However, for completeness, the Hanford Site is

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currently included in the Benton County Comprehensive Plan (June 22, 1998) as the undesignated "Hanford Sub-Area".

f. What is the current comprehensive plan designation of the site?

The Federal land management decision process has determined through NEPA [*Hanford Comprehensive Land-Use Plan Environmental Impact Statement Record of Decision* (64 FR 61615, November 12, 1999)] that the 200 East Area geographic area, which includes the 216-A-36B Crib, is designated Industrial-Exclusive.

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

Does not apply.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Does not apply (refer to Section B.8.f.).

9. Housing

a. Approximately how many units would be `provided, if any? Indicate whether high, middle, or low-income housing.

None.

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b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

No new structures are being proposed.

b. What views in the immediate vicinity would be altered or obstructed?

None.

c. Proposed measures to reduce or control aesthetic impacts, if any:

None.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None.

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d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

None.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any?

None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No places or objects listed on, or proposed for, national, state, or local preservation registers are known to be on or next to the 216-A-36B Crib.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

There are no known archaeological, historical, or Native American religious sites on or near the 216-A-36B Crib.

c. Proposed measures to reduce or control impacts, if any:

None.

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14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Does not apply.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No. The distance to the nearest public transit stop is approximately 50 kilometers, located at Washington State University Tri-Cities.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

No additional vehicular traffic will be required.

g. Proposed measures to reduce or control transportation impacts, if any:

None.

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15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any:

Does not apply.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:

No utilities currently are available at the 216-A-36B Crib.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No utilities are proposed supporting closure of the 216-A-36B Crib.

SIGNATURES

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Keith A. Klein, Manager
U.S. Department of Energy
Richland Operations Office

Date